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Our Case No. 5404/18

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Atsuhiko Shinmyo et al.

International Application No.
PCT/JP01/05096

International Filing Date: June 15, 2001

Title of Invention: METHOD OF INDUCING GENE EXPRESSION IN PLANT AND PLANT TREATED THEREBY

PRELIMINARY AMENDMENT

Attn: Box DO/EO/US
Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Preliminary to examination of the subject application, please amend the above-identified application as follows:

IN THE SPECIFICATION

Page 1, after the title, insert the following paragraph:

"RELATED APPLICATIONS

This application is a nationalization of PCT application PCT/JP01/05096 filed June 15, 2001. This application claims priority from the PCT application and Japan Application Serial No. 2000-180466 filed June 15, 2000.

IN THE CLAIMS

Please amend the claims as follows:

4. (Amended) The method according to Claim 1, wherein said autogenous regulatory factor is a butyrolactone autogenous regulatory factor.

5. (Amended) The method according to Claim 1, wherein said autogenous regulatory factor is virginiae butanolide.

6. (Amended) The method according to Claim 1, wherein said gene expression inducing system is involved in a production of an antibiotic.

7. (Amended) The method according to Claim 1, wherein said gene expression inducing system is involved in a production of virginiamycin.

8. (Amended) The method according to Claim 1, wherein said repressor gene is a barA gene.

9. (Amended) The method according to Claim 1, wherein said repressor gene contains a region comprising a nucleotide sequence shown under SEQ ID NO:1.

10. (Amended) The method according to Claim 1, wherein said repressor gene contains a region coding for an amino acid sequence shown under SEQ ID NO:2.

11. (Amended) The method according to Claim 1, wherein a promoter for said repressor gene is a plant promotor.

13. (Amended) The method according to Claim 1, wherein a nucleotide sequence of said operator is derived from a barA, barB or barX gene.

14. (Amended) The method according to Claim 1, wherein a nucleotide sequence of said operator is BARE-1, BARE-2 or BARE-3.

15. (Amended) The method according to Claim 1, wherein a nucleotide sequence of said operator is BARE-3.

16. (Amended) The method according to Claim 1, wherein the nucleotide sequence of said operator contains a region comprising a nucleotide sequence shown under SEQ ID NO:3.

17. (Amended) The method according to Claim 1, wherein a promoter for said gene placed under the control of the operator is a plant promoter.

19. (Amended) The method according to Claim 17, wherein said operator is disposed in at least one place in said plant promoter.

20. (Amended) The method according to Claim 17, wherein said operator is disposed in at least one place in the vicinity of a site 3' downstream or in the vicinity of a site 5' upstream of a TATA box of said plant promoter.

21. (Amended) The method according to Claim 17, wherein said operator is disposed, together with the TATA box of said plant promoter, in a manner shown under any of SEQ ID NO:4 through SEQ ID NO:7.

22. (Amended) The method according to Claim 1, wherein said gene placed under the control of the operator is a gene capable of providing the plant with fertility.

23. (Amended) A plant transformed by the method according to Claim 1.

24. (Amended) Tobacco (Nicotiana tabacum L.) transformed by the method according to Claim 1.

25. (Amended) A cultured plant cell transformed by the method according to Claim 1.

26. (Amended) A cultured tobacco cell transformed by the method according to Claim 1.

27. (Amended) A cultured tobacco BY2 cell transformed by the method according to Claim 1.

30. (Amended) The repressor gene according to Claim 28 wherein said repressor gene is a barA gene.

31. (Amended) The repressor gene according to Claim 28 wherein said repressor gene contains a region comprising a nucleotide sequence shown under SEQ ID NO:1.

32. (Amended) The repressor gene according to Claim 28 wherein said repressor gene contains a region coding for an amino acid sequence shown under SEQ ID NO:2.

35. (Amended) The modified promoter according to Claim 33, wherein a nucleotide sequence of said operator is BARE-1, BARE-2 or BARE-3.

36. (Amended) The modified promoter according to Claim 33, wherein the nucleotide sequence of said operator contains a region comprising a nucleotide sequence shown under SEQ ID NO:3.

37. (Amended) The modified promoter according to Claim 33, wherein said operator is disposed, together with the TATA box of said plant promoter, in a manner shown under any of SEQ ID NO:4 through SEQ ID NO:7.

REMARKS

The specification is amended to make record therein of the priorities claimed. The Claims are amended to reduce their number.

Respectfully submitted,

Richard G. Lione
Reg. No. 19,795
Attorney for Applicants

Date: Feb. 15, 2002

BRINKS HOFER GILSON & LIONE
P.O. Box 10395
Chicago, Illinois 60610
(312) 321-4200

APPENDIX A

Version With Markings to Show Changes Made

CLAIMS

4. (Amended) The method according to [any of] Claim[s] 1 [to 3], wherein said autogenous regulatory factor is a butyrolactone autogenous regulatory factor.

5. (Amended) The method according to [any of] Claim[s] 1 [to 3], wherein said autogenous regulatory factor is virginiae butanolide.

6. (Amended) The method according to [any of] Claim[s] 1 [to 5], wherein said gene expression inducing system is involved in a production of an antibiotic.

7. (Amended) The method according to [any of] Claim[s] 1 [to 5], wherein said gene expression inducing system is involved in a production of virginiamycin.

8. (Amended) The method according to [any of] Claim[s] 1 [to 7], wherein said repressor gene is a barA gene.

9. (Amended) The method according to [any of] Claim[s] 1 [to 8], wherein said repressor gene contains a region comprising a nucleotide sequence shown under SEQ ID NO:1.

10. (Amended) The method according to [any of] Claim[s] 1 [to 9], wherein said repressor gene contains a region coding for an amino acid sequence shown under SEQ ID NO:2.

11. (Amended) The method according to [any of] Claim[s] 1 [to 10], wherein a promoter for said repressor gene is a plant promotor.

13. (Amended) The method according to [any of] Claim[s] 1 [to 12], wherein a nucleotide sequence of said operator is derived from a barA, barB or barX gene.

14. (Amended) The method according to [any of] Claim[s] 1 [to 12], wherein a nucleotide sequence of said operator is BARE-1, BARE-2 or BARE-3.

15. (Amended) The method according to [any of] Claim[s] 1 [to 12], wherein a nucleotide sequence of said operator is BARE-3.

16. (Amended) The method according to [any of] Claim[s] 1 [to 15], wherein the nucleotide sequence of said operator contains a region comprising a nucleotide sequence shown under SEQ ID NO:3.

17. (Amended) The method according to [any of] Claim[s] 1 [to 16], wherein a promoter for said gene placed under the control of the operator is a plant promoter.

19. (Amended) The method according to Claim 17 [or 18], wherein said operator is disposed in at least one place in said plant promoter.

20. (Amended) The method according to Claim 17 [or 18], wherein said operator is disposed in at least one place in the vicinity of a site 3' downstream or in the vicinity of a site 5' upstream of a TATA box of said plant promoter.

21. (Amended) The method according to [any of] Claim[s] 17 [to 20], wherein said operator is disposed, together with the TATA box of said plant promoter, in a manner shown under any of SEQ ID NO:4 through SEQ ID NO:7.

22. (Amended) The method according to [any of] Claim[s] 1 [to 21], wherein said gene placed under the control of the operator is a gene capable of providing the plant with fertility.

23. (Amended) A plant transformed by the method according to [any of] Claim[s] 1 [to 22].

24. (Amended) Tobacco (Nicotiana tabacum L.) transformed by the method according to [any of] Claim[s] 1 [to 22].

25. (Amended) A cultured plant cell transformed by the method according to [any of] Claim[s] 1 [to 22].

26. (Amended) A cultured tobacco cell transformed by the method according to [any of] Claim[s] 1 [to 22].

27. (Amended) A cultured tobacco BY2 cell transformed by the method according to [any of] Claim[s] 1 [to 22].

30. (Amended) The repressor gene according to Claim 28 [or 29] wherein said repressor gene is a barA gene.

31. (Amended) The repressor gene according to [any of] Claim[s] 28 [to 30] wherein said repressor gene contains a region comprising a nucleotide sequence shown under SEQ ID NO:1.

32. (Amended) The repressor gene according to [any of] Claim[s] 28 [to 31] wherein said repressor gene contains a region coding for an amino acid sequence shown under SEQ ID NO:2.

35. (Amended) The modified promoter according to Claim 33 [or 34], wherein a nucleotide sequence of said operator is BARE-1, BARE-2 or BARE-3.

36. (Amended) The modified promoter according to [any of] Claim[s] 33 [to 35], wherein the nucleotide sequence of said operator contains a region comprising a nucleotide sequence shown under SEQ ID NO:3.

37. (Amended) The modified promoter according to [any of] Claim[s] 33 [to 36], wherein said operator is disposed, together with the TATA box of said plant promoter, in a manner shown under any of SEQ ID NO:4 through SEQ ID NO:7.

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<303> The Journal of Biological Chemistry
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<302> Characterization of Binding Sequences for Butyrolactone Autoregulator Receptors in Streptomycetes
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